

October 22, 2015 1:55:23 PM

138071

Page 1

Item ID: 647.3703

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: 204,205,212,214 Cable Cutter System, Standard

Stop *NS2*

Start Date: 10/22/2015 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 10/27/2015 **Req'd Qty:** 1.00 ***1***

Customer:

Reference:

Approvals:

Process Plan:

~~2 0 1 5 1 0 2 2~~

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

[illegible]

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐	
Design ☐		Operator ☐		Bending ☐		Set-up ☐	
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐	
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐	
Handling/Pre ☐		Training ☐		Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐	
Material ☐		Use for Testing ☐		Cuffs ☐		Contamination ☐	
Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐	
Tribal Knowledge ☐		Rushing ☐		Heat Treat ☐		Cut Too Short ☐	
LOA ☐		Product Improvement ☐		Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐	
Substation ☐		Process Improvement ☐		Marks/Chatter ☐		Drill Holes ☐	
Past Expiry Date ☐		Manufacturing Process ☐		OTHER : _____			
Misidentified ☐		Past Due ☐					

Work Order ID 138071

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Page 2

Item ID: 647.3703

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: 204,205,212,214 Cable Cutter System, Standard

Start Date: 10/22/2015 Start Qty: 1.00

1

Cust Item ID:

Required Date: 10/27/2015 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

130

Packaging

Packaging

Memo

0.00

Identify and pack for shipping as per PPP 647.3703
Location: _____

DAS
6
9-08

OCT 29 2014

140

140

QC

Quality Control

QC21- Final Inspection - Work Order Release

Memo

0.00

0.00

MLS

OCT 27 2015

5/12/2015 1027

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified	☐	Past Due	☐				

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Work Order ID: 138071

138071

Parent Item: 647.3703

647 3703

Parent Item Name: 204,205,212,214 Cable Cutter System, Standard

Start Date: 10/22/2015

Required Date: 10/27/2015

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP REV:A 12.10.26 NEW ISSUE DD VERF:JLM
REV:B 15.01.26 as per ecr 14-214 DD VERF:JLM
PER REV NC3 15.03.18 JLM VERIFIED BY:DD

IPP
IPP REV:C AS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
601.3082		Purchased	No				Each	45.0000		6			
601 3082									**			DAS 27 9-89	DAS 28 9-89
RIVET													
	DAS 6 9-89			<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				CCK099				45					
				m129702				45		6			
CR3212-4-1													
647.3903		Manufactured	No				Each	1.0000		1			
647 3903									**				DAS
Deflector Assembly												DAS 27 9-89	DAS 28 9-89
	DAS 6 9-89			<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				cck024				1					
				137400				1					
647.3802		Manufactured	No			110	Each	18.0000		1			
647 3802									**			DAS 27 9-89	DAS 28 9-89
212 Upper Cutter Assy													
	DAS 6 9-89			<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				cck030				18					
				124717				12					
				124719				2					
				124722				2					
				124723				2					

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Work Order ID: 138071

138071

Parent Item: 647.3703

647 3703

Parent Item Name: 204,205,212,214 Cable Cutter System, Standard

Start Date: 10/22/2015

Required Date: 10/27/2015

Start Qty: 1.00

Required Qty: 1.00

647.3803

Manufactured No

110 Each

3.0000

1 1

647 3803

Lower Cutter Assy Low

**

DAS

DAS

27

28

9-89

9-89

Location

Loc Qty

Loc Code

cck29

3

124720

3

647.4410

Manufactured No

110 Each

25.0000

1

647 4410

Rail

**

DAS

DAS

27

28

9-89

9-89

Location

Loc Qty

Loc Code

CCK081

25

120755

9

120986

16

647.4010

Manufactured No

110 Each

29.0000

1

647 4010

Wiper Deflector RH

**

DAS

DAS

27

28

9-89

9-89

Location

Loc Qty

Loc Code

cck87

29

120628

4

120740

17

m129721

8

647.4011

Manufactured No

110 Each

28.0000

1

647 4011

Wiper Deflector LH

**

DAS

DAS

27

28

9-89

9-89

Location

Loc Qty

Loc Code

cck78

28

120629

4

120741

17

m129721

7

DAS

6

9-89

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Page 3

Work Order ID: 138071

138071

Parent Item: 647.3703

647 370.3

Parent Item Name: 204,205,212,214 Cable Cutter System, Standard

Start Date: 10/22/2015

Required Date: 10/27/2015

Start Qty: 1.00

Required Qty: 1.00

647.4110
647 4110
Doubler

Manufactured No

110 Each 25.0000 1

**

DAS 27 9-89
DAS 28 9-89

Location Loc Qty Loc Code

CCK080 25
120742 7
120987 18

647.4111
647 4111
Doubler

Manufactured No

110 Each 26.0000 1

**

DAS 27 9-89
DAS 28 9-89

DAS 6 9-89

Location Loc Qty Loc Code

cck111 26
120743 16
120967 10

647.4112
647 4112
Clip

Manufactured No

110 Each 12.0000 1

**

DAS 27 9-89
DAS 28 9-89

DAS 6 9-89

Location Loc Qty Loc Code

CCK112 12
126770 12

647.4113
647 4113
Clip

Manufactured No

110 Each 12.0000 1

**

DAS 27 9-89
DAS 28 9-89

DAS 6 9-89

Location Loc Qty Loc Code

CCK112 12
126771 12

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Work Order ID: 138071

138071

Parent Item: 647.3703

647 370.3

Parent Item Name: 204,205,212,214 Cable Cutter System, Standard

Start Date: 10/22/2015

Required Date: 10/27/2015

Start Qty: 1.00

Required Qty: 1.00

647.4114

Manufactured No

110 Each

57.0000

2 2

647 4114

Shim

DAS

6

9-89

Location

Loc Qty

Loc Code

CCK112

57

120635

14

120746

28

120941

15

DAS

27

9-89

DAS

28

9-89

647.4115

Manufactured No

110 Each

42.0000

2

647 4115

Shim

DAS

6

9-89

Location

Loc Qty

Loc Code

CCK112

42

120747

31

120949

11

DAS

27

9-89

DAS

28

9-89

647.4116

Manufactured No

110 Each

27.0000

1 1

647 4116

Shim

DAS

6

9-89

Location

Loc Qty

Loc Code

CCK112

27

120748

11

121064

16

DAS

27

9-89

DAS

28

9-89

647.4210

Manufactured No

110 Each

23.0000

1

647 4210

Bracket LH

DAS

6

9-89

Location

Loc Qty

Loc Code

CCK112

8

120749

8

CCK123

15

121086

15

DAS

27

9-89

DAS

28

9-89

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Work Order ID: 138071

138071

Parent Item: 647.3703

647 3703

Parent Item Name: 204,205,212,214 Cable Cutter System, Standard

Start Date: 10/22/2015

Required Date: 10/27/2015

Start Qty: 1.00

Required Qty: 1.00

647.4211

Manufactured No

110

Each

25.0000

1

647 4211

Bracket RH

**

DAS

27

DAS

28

9-89

9-89

DAS

6

9-89

Location

Loc Qty

Loc Code

CCK112

10

120750

10

CCK123

15

121134

15

647.4212

Manufactured No

110

Each

10.0000

1

647 4212

Plate

**

DAS

27

9-89

DAS

28

9-89

DAS

6

9-89

Location

Loc Qty

Loc Code

CCK112

10

120945

5

m129702

5

647.4311

Manufactured No

110

Each

10.0000

1

647 4311

RH Lower Strut

**

DAS

27

9-89

DAS

28

9-89

DAS

6

9-89

Location

Loc Qty

Loc Code

CCK67

10

126398

10

647.4310

Manufactured No

110

Each

29.0000

1

647 4310

LH Lower Strut

**

DAS

27

9-89

OCT 26 2015

DAS

6

9-89

Location

Loc Qty

Loc Code

cck066

29

126395

19

126396

10

DAS

28

9-89

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Work Order ID: 138071

138071

Parent Item: 647.3703

647 3703

Parent Item Name: 204,205,212,214 Cable Cutter System, Standard

Start Date: 10/22/2015

Required Date: 10/27/2015

Start Qty: 1.00

Required Qty: 1.00

NAS1149F0332P

Purchased

No

110

Each

1,672.000

~~157~~

157

NAS1149F0332P

Washer

DAS
6
9-89

Location

Loc Qty

Loc Code

GA	162
122063	162
ST260a	1393
m128401	6
m131026	80
m131697	50
m133134	600
m133284	500
m133316	157
st268	117
123900	7
m130388	86
m133077	24

157

DAS
27
9-89
DAS
28
9-89

MS27039-1-07

Purchased

No

110

Each

450.0000

~~12~~

12

MS27039-1-07

Screw

DAS
6
9-89

Location

Loc Qty

Loc Code

GA	334
125654	334
ST286	116
m127813	108
m130388	8

12

DAS
27
9-89
DAS
28
9-89

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Work Order ID: 138071

138071

Parent Item: 647.3703

647 3703

Parent Item Name: 204,205,212,214 Cable Cutter System, Standard

Start Date: 10/22/2015

Required Date: 10/27/2015

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-10

Purchased

No

110

Each

343.0000

42

42

MS27039-1-10

SCREW

DAS
27
9-89

DAS
28
9-89

DAS
6
9-89

Location

Loc Qty

Loc Code

CA

41

m128635

41

cck007a

200

m132677

200

GA

50

m129541

50

ST285

52

m123522

2

m132640

50

42

MS27039-08-08

Purchased

No

110

Each

139.0000

16

16

MS27039-08-08

Screw

DAS
27
9-89

DAS
28
9-89

DAS
6
9-89

Location

Loc Qty

Loc Code

CA

8

m130113

8

ST282

131

m129541

20

m130799

111

16

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Work Order ID: 138071

138071

Parent Item: 647.3703

647 3703

Parent Item Name: 204,205,212,214 Cable Cutter System, Standard

Start Date: 10/22/2015

Required Date: 10/27/2015

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-09

Purchased

No

110

Each

215.0000

14

14

MS27039-1-09

Screw

**

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

FP001

34

18057

34

GA

36

124859

36

ST0285

105

125646

105

ST285

40

124859

29

m130388

11

14

MS27039-08-11

Purchased

No

110

Each

202.0000

2

2

MS27039-08-11

SCREW

**

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

cck007a

100

m133363

100

ST282

102

m130358

1

m133134

101

2

MS24694-S49

Purchased

No

110

Each

232.0000

1

1

MS24694-S49

Screw

**

DAS
27
9-89

OCT 26 2015

DAS
28
9-89

Location

Loc Qty

Loc Code

ST289

232

m129499

100

m129702

132

1

DAS
6
9-89

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause		FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

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Work Order ID: 138071

138071

Parent Item: 647.3703

647 3703

Parent Item Name: 204,205,212,214 Cable Cutter System, Standard

Start Date: 10/22/2015

Required Date: 10/27/2015

Start Qty: 1.00

Required Qty: 1.00

MS24694-C53

Purchased

No

110

Each

168.0000

8

DAS

27

9-89

DAS

28

9-89

MS24694-C53

Screw

DAS
6
9-89

[Handwritten mark]

Location

Loc Qty

Loc Code

ST287

168

16

152

m129499

m129702

m13359

8

601.3073

Purchased

No

110

Each

5.0000

1

DAS

27

9-89

DAS

28

9-89

601 3073

Connector

Location

Loc Qty

Loc Code

CCK099

5

1

4

126805

M133344

[Handwritten mark]

AN3-4A

Purchased

No

110

Each

162.0000

3

3

DAS

27

9-89

DAS

28

9-89

AN3-4A

Bolt

DAS
6
9-89

Location

Loc Qty

Loc Code

ST338a

100

100

m133234

ST350

62

53

5

4

m129682

m132317

m133064

[Handwritten mark]

3

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	☐	Pressure/Forced ☐	☐	Temperature/Cure ☐	☐
Design ☐	☐	Operator ☐	☐	Bending ☐	☐	Set-up ☐	☐
Doc/Data ☐	☐	Offset/Setup ☐	☐	Centre Not Concentric ☐	☐	BOM/Route ☐	☐
Equip/Tooling ☐	☐	Supplier ☐	☐	Cracks ☐	☐	Broken/Damage/Defect ☐	☐
Handling/Pre ☐	☐	Training ☐	☐	Crimp/Kink/Ripple/Wave ☐	☐	Inspection Incomplete/Unqualified ☐	☐
Material ☐	☐	Use for Testing ☐	☐	Cuffs ☐	☐	Contamination ☐	☐
Internal Transport ☐	☐	Poor Information ☐	☐	Crushing ☐	☐	Countersink ☐	☐
Tribal Knowledge ☐	☐	Rushing ☐	☐	Heat Treat ☐	☐	Cut Too Short ☐	☐
LOA ☐	☐	Product Improvement ☐	☐	Wave/Twist in Tube ☐	☐	Instructions Incomplete/Unclear ☐	☐
Substation ☐	☐	Process Improvement ☐	☐	Marks/Chatter ☐	☐	Drill Holes ☐	☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	☐	OTHER : _____			
Misidentified ☐	☐	Past Due ☐	☐				

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Work Order ID: 138071

138071

Parent Item: 647.3703

647 3703

Parent Item Name: 204,205,212,214 Cable Cutter System, Standard

Start Date: 10/22/2015

Required Date: 10/27/2015

Start Qty: 1.00

Required Qty: 1.00

AN3-11A

Purchased

No

110

Each

150.0000

8

AN3-11A

Bolt

DAS
6
9-89

Location

Loc Qty

Loc Code

ST338a

50

m133363

50

ST349

100

m132823

8

m133234

92

AN3C10A

Purchased

No

110

Each

17.0000

2

AN3C10A

Bolt

DAS
6
9-89

Location

Loc Qty

Loc Code

ST349

17

m128634

17

CR3212-4-2

Purchased

No

110

Each

109.0000

5

CR3212-4-2

Cherry Rivet

DAS
6
9-89

Location

Loc Qty

Loc Code

CCK005

100

m133363

100

ST320

9

121090

9

CR3212-4-3

Purchased

No

110

Each

0.0000

17

CR3212-4-3

Cherry Rivet

DAS
6
9-89

CR3212-4-4

CR3212-4-04

Purchased

No

110

Each

0.0000

7

CR3212-4-4

CHERRY RIVET

DAS
6
9-89

m13337

BAS
27
9-89

DA
28
9-89

BAS
27
9-89

DAS
28
9-89

BAS
27
9-89

DAS
28
9-89

DAS
28
9-89

BAS
27
9-89

BAS
27
9-89

DAS
28
9-89

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	OTHER :							
Misidentified	☐	Past Due								

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Work Order ID: 138071

138071

Parent Item: 647.3703

647 3703

Parent Item Name: 204,205,212,214 Cable Cutter System, Standard

Start Date: 10/22/2015

Required Date: 10/27/2015

Start Qty: 1.00

Required Qty: 1.00

CCR264SS3-04

Purchased

No

110

Each

711.0000

12

CCR264SS3-04

Rivet

**

DAS

DAS

27

28

9-89

9-89

DAS

6

9-89

Location

Loc Qty

Loc Code

CCK004

590

123785

400

m129702

190

ST321

121

123352

121

CCR264SS-3-03

Purchased

No

110

Each

179.0000

16

16

CCR264SS-3-03

Rivet

**

DAS

DAS

27

28

9-89

9-89

DAS

6

9-89

Location

Loc Qty

Loc Code

LG001

123

m128606

123

ST321

56

m128606

56

CR3213-4-2

Purchased

No

110

Each

557.0000

31

31

CR3213-4-2

Cherry Rivet

**

DAS

DAS

27

28

9-89

9-89

DAS

6

9-89

Location

Loc Qty

Loc Code

CCK003

192

123301

192

ST319

365

m131340

365

m138936

m121090

23

8

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Skid-tube ☐</td> <td style="width: 15%;">Cross tube ☐</td> <td style="width: 15%;">Water Jet ☐</td> <td style="width: 15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"> Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ </td> <td style="width: 50%;"> No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ </td> </tr> </table>		Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	FAULT CATEGORY <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"> Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ </td> <td style="width: 33%;"> Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ </td> <td style="width: 33%;"> Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ </td> <td style="width: 33%;"> Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐ </td> </tr> </table>						Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐											
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐																								
Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																						

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Work Order ID: 138071

138071

Parent Item: 647.3703

647 3703

Parent Item Name: 204,205,212,214 Cable Cutter System, Standard

Start Date: 10/22/2015

Required Date: 10/27/2015

Start Qty: 1.00

Required Qty: 1.00

CR3213-4-3

Purchased

No

110

Each

441.0000

24

24

CR3213-4-3

Rivet, Cherry

**

DAS

DAS

27

28

9-89

9-89

Location

Loc Qty

Loc Code

CCK004

241

123301

69

m129541

100

m130388

72

ST318

200

m131340

200

m128634

2

m123301

22

CR3213-4-4

Purchased

No

110

Each

456.0000

16

16

CR3213-4-4

Rivet, Cherry

**

DAS

DAS

27

28

9-89

9-89

Location

Loc Qty

Loc Code

CCK004

408

126282

408

ST319

48

M130388

48

16

CR3213-4-5

Purchased

No

110

Each

264.0000

28

28

CR3213-4-5

Rivet

**

DAS

DAS

27

28

9-89

9-89

Location

Loc Qty

Loc Code

CCK003

259

M129913

259

CCK004

5

M130388

5

m123301

28

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified	☐	Past Due	☐				

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Work Order ID: 138071

138071

Parent Item: 647.3703

647 3703

Parent Item Name: 204,205,212,214 Cable Cutter System, Standard

Start Date: 10/22/2015

Required Date: 10/27/2015

Start Qty: 1.00

Required Qty: 1.00

CR3213-4-8

Purchased

No

110

Each

148.0000

4

4

CR3213-4-8

Rivet

DAS
6
9-89

Location

Loc Qty

Loc Code

ST319

148

123785

148

**

DAS
27
9-89

DAS
28
9-89

MS21042-3

MS21042L3

Purchased

No

110

Each

329.0000

79

79

MS21042-3

Nut / use MS21042L3

DAS
6
9-89

Location

Loc Qty

Loc Code

ST305

329

M128770

10

M129541

15

M129682

281

M130388

23

**

DAS
27
9-89

DAS
28
9-89

MS21042-08

MS21042L08

Purchased

No

110

Each

33.0000

18

18

MS21042-08

USE MS21042L08

DAS
6
9-89

Location

Loc Qty

Loc Code

ST304

25

122815

25

ST306

8

m130388

8

**

DAS
27
9-89

DAS
28
9-89

MS21047L06

Purchased

No

110

Each

80.0000

6

6

MS21047L06

Nut/Plate

DAS
6
9-89

Location

Loc Qty

Loc Code

ST303

80

m131340

80

**

DAS
27
9-89

DAS
28
9-89

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : ☐									

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Work Order ID: 138071

138071

Parent Item: 647.3703

647 3703

Parent Item Name: 204,205,212,214 Cable Cutter System, Standard

Start Date: 10/22/2015

Required Date: 10/27/2015

Start Qty: 1.00

Required Qty: 1.00

MS21047L08

Purchased

No

110

Each

45.0000

6

6

MS21047L08

Nut Plate

DAS
6
9-89

Location

Loc Qty

Loc Code

ST303

45

m129702

45

6

DAS
27
9-89

DAS
28
9-89

MS21047-3

Purchased

No

110

Each

155.0000

4

4

MS21047-3

Nut Plate

DAS
6
9-89

Location

Loc Qty

Loc Code

CCK007

50

m133031

50

ST303

105

m130388

8

m133134

47

m133234

50

4

DAS
27
9-89

DAS
28
9-89

MS21071L3

Purchased

No

110

Each

248.0000

4

4

MS21071L3

ANCHOR NUT

DAS
6
9-89

Location

Loc Qty

Loc Code

ST301

248

114348

1

124291

43

125654

100

m129702

104

4

DAS
27
9-89

DAS
28
9-89

601.3083

Manufactured

No

110

Each

8.0000

1

1

601 3083

Adhesive Rubber Seal

DAS
6
9-89

Location

Loc Qty

Loc Code

cck012

8

130723

8

1

DAS
27
9-89
OCT 26 2015
28
9-89

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐			FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : ☐								

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Work Order ID: 138071

138071

Parent Item: 647.3703

647 3703

Parent Item Name: 204,205,212,214 Cable Cutter System, Standard

Start Date: 10/22/2015

Required Date: 10/27/2015

Start Qty: 1.00

Required Qty: 1.00

601.1012 Purchased No 110 Each 0.0000 1 1

601 1012

Sealant (One 6 oz)

601.2045

601 2045

RTV (LOCTITE 598)

DAS Purchased

6
9-89

Purchased No

110 Each

0.0000

1

1

DAS
27
9-89

DAS
28
9-89

110 Each

12.0000

1

1

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK096

12

m133275

12

5/31/2017

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									



04881

DWG NO. 647.3700

REV: N/C

PREPARED BY J. BECKER

DATE: 02/26/15

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: 412 CABLE CUTTERS KIT

APPROVED BY: ENGR

MFG.

QC

EFF. NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: DELETED F/N 57, REVISED F/N 6.

ECR: N/A

IS:

DETAIL F

2 PL (35) (24) (47)

△ 1 2 OR 1

4 PL (34) 8 PL (24) 4 PL (47)

△ 1 6

24 72 PL 36 PL 47 36 PL

△ 1 11

46 4 PL 12 1 23 16 PL 27 8 PL 48 8 PL

REF (21) 24 8 PL 28 8 PL 14 2 PL △ 1 16 △ 1 13 2 PL △ 1 52 4 PL 41 8 PL 38 4 PL 51 4 PL 41 8 PL 38 9 PL 9 1

SHOWN ISOMETRICALLY

20151022
138071

57	D	647.3916	1	1	1	1	DEFLECTOR UPPER HALF			
6	R	647.3903	1	1	1	1	DEFLECTOR ASSEMBLY			
F/N	TC	PART NUMBER	3704	3703	3702	3701	DESCRIPTION		MATERIAL	SPECIFICATION
			QTY							
DOCUMENTS EFFECTED:							CHANGE CATEGORY		DER REVIEW REQUIRED	
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM							☐ MAJOR ☒ MINOR		☐ YES ☒ NO	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																																																																																																																							
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APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

04845

SHEET 1 OF 1

DWG NO. 647.3700

REV: N/C

PREPARED BY J. BECKER

DATE: 02/11/15

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: 412 CABLE CUTTERS KIT

APPROVED BY: ENGR

MFG

QC

EFF. NEXT ORDER

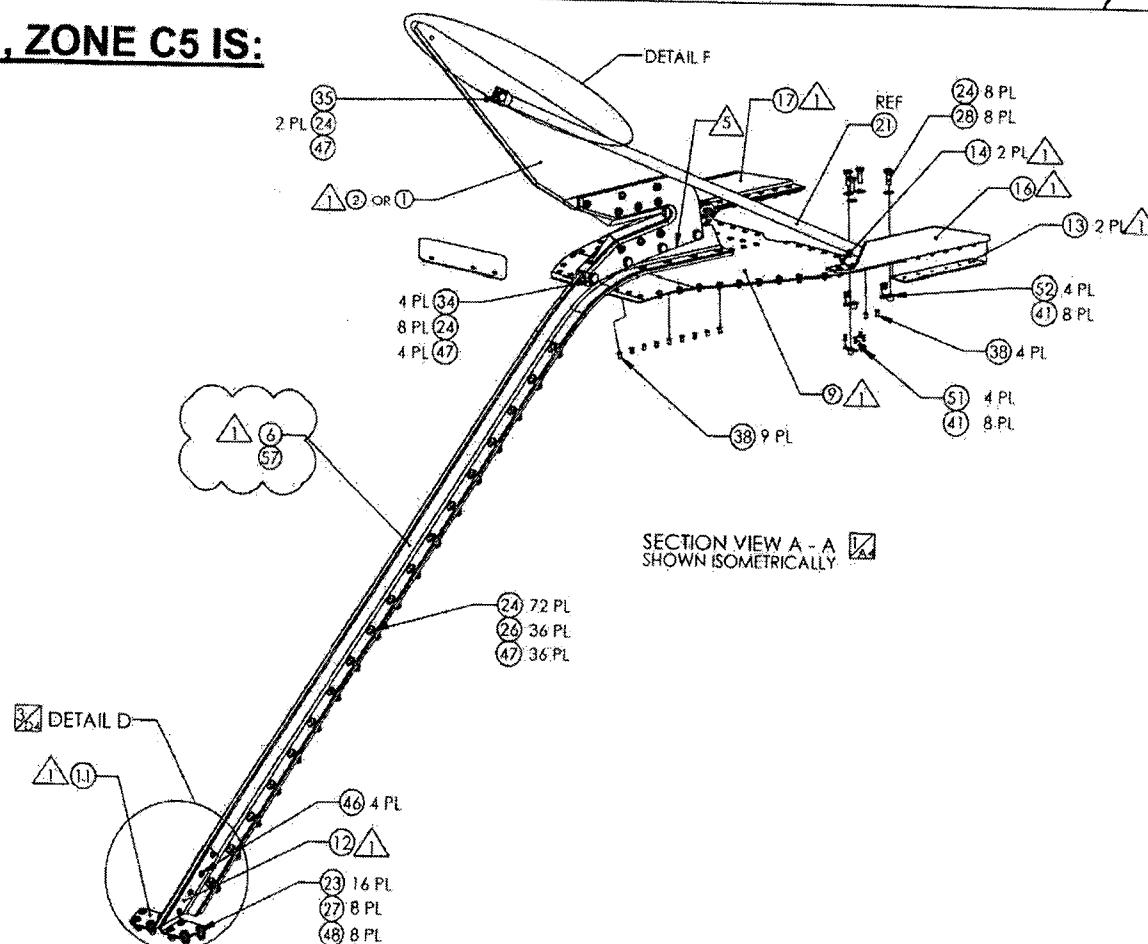
TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: ADDED F/N 57

ECR:

SHEET 1, ZONE C5 IS:

ACTION ITEM:
1.



57	A	647.3916	1	1	1	1	DEFLECTOR UPPER HALF					
F/N	TC	PART NUMBER	3704	3703	3702	3701	DESCRIPTION				MATERIAL	SPECIFICATION
			QTY									
DOCUMENTS EFFECTED:							☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM				CHANGE CATEGORY	DER REVIEW REQUIRED
											☐ MAJOR ☒ MINOR	☐ YES ☒ NO

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified	☐	Past Due	☐				

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

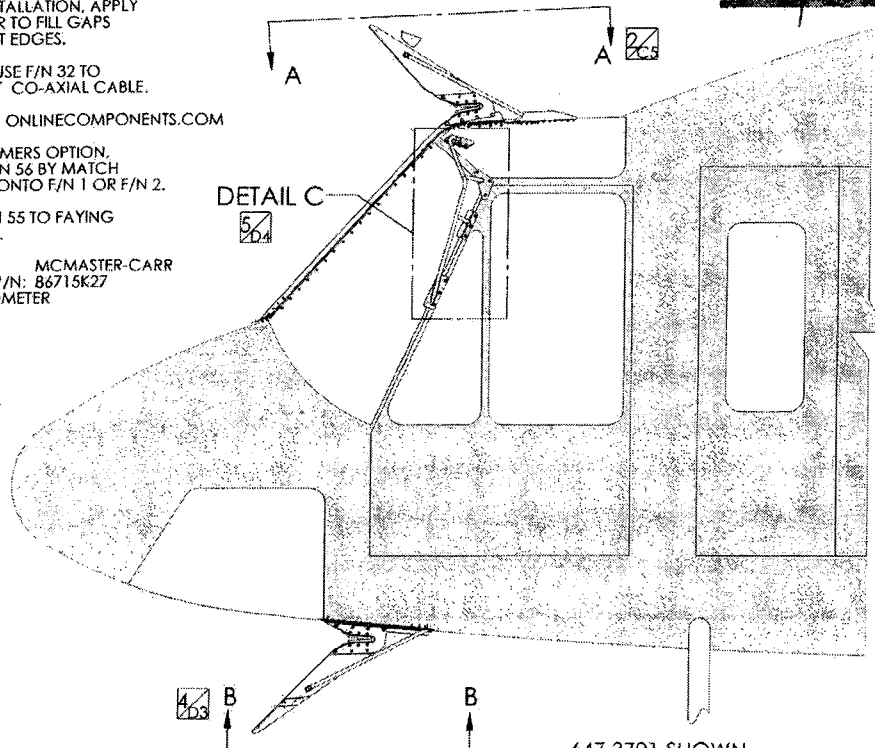
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval				
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Root Cause		FAULT CATEGORY									
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
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Past Expiry Date	☐	Manufacturing Process	☐	OTHER :							
Misidentified	☐	Past Due	☐								

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NOTES:

- 1 AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.
- 2 IF REQD, USE F/N 32 TO CONNECT CO-AXIAL CABLE.
- 3 VENDOR : ONLINECOMPONENTS.COM
- 4 AT CUSTOMERS OPTION, INSTALL F/N 56 BY MATCH DRILLING ONTO F/N 1 OR F/N 2.
- 5 APPLY F/N 55 TO FAYING SURFACES.
- 6 VENDOR : MCMMASTER-CARR
VENDOR P/N: 86715K27
60A DUROMETER



UNINCORPORATED ECN(S)

07328, 04845, 04880

REV.	DESCRIPTION	DATE	APPROVED
LAST PRELIMINARY REVISION			
REV.	REVISION	DATE	APPROVED
1	1	09-09-09	P. BRAY

16	16	16	16	41	601.2207	NUTPLATE RIVET	CCR26455-3-00
12	12	12	12	40	601.2491	NUTPLATE RIVET	CCR26455-3-04
7	7	4	4	39	601.1066	CHERRY RIVET	CR3212-4-4
17	17	17	17	38	601.1065	CHERRY RIVET	CR3212-4-8
5	5	6	6	37	601.1604	CHERRY RIVET	CR3212-4-2
6	6	6	6	36	601.3082	CHERRY RIVET	CR3212-4-1
2	2	2	2	35	601.1874	BOLT	ANSI310A
5	8	8	8	34	601.2826	BOLT	ANSI311A
3	3	3	3	33	601.2823	BOLT	ANSI311A
1	1	1	1	32	601.3073	CONNECTOR	085-4443
8	8	8	8	31	601.2419	SCREW	MS24594CS3
1	1	1	1	30	601.3070	SCREW	MS24694-549
2	2	2	2	29	601.2893	SCREW	MS27039-0811
14	14	14	14	28	601.3069	SCREW	MS27039-1-09
16	16	16	16	27	601.2263	SCREW	MS27039-1B06
42	42	42	42	26	601.1365	SCREW	MS27039-1-10
12	12	12	12	25	601.2198	SCREW	MS27039-1-07
157	157	157	157	24	601.1607	WASHER	NAS1149F0337P
34	34	34	34	23	601.2764	WASHER	NAS1149F0337P
1	1	1	1	22	647.4313	RH UPPER STRUT	
1	1	1	1	21	647.4312	LH UPPER STRUT	
1	1	1	1	20	647.4310	LH LOWER STRUT	
1	1	1	1	19	647.4311	RH LOWER STRUT	
1	1	1	1	18	647.4212	PLATE	
1	1	1	1	17	647.4211	BRACKET RH	
1	1	1	1	16	647.4210	BRACKET LH	
1	1	1	1	15	647.4116	SHIM	
2	2	2	2	14	647.4115	SHIM	
2	2	2	2	13	647.4114	SHIM	
1	1	1	1	12	647.4113	CLIP	
1	1	1	1	11	647.4112	CLIP	
1	1	1	1	10	647.4111	DOUBLER	
1	1	1	1	9	647.4110	DOUBLER	
1	1	1	1	8	647.4011	WIPER DEFLECTOR LH	
1	1	1	1	7	647.4010	WIPER DEFLECTOR RH	
1	1	1	1	6	647.3915	DEFLECTOR	
1	1	1	1	5	647.4410	RAIL	
1	1	1	1	4	647.3804	LOWER CUTTER ASSY HIGH	
1	1	1	1	3	647.3803	LOWER CUTTER ASSY LOW	
1	1	1	1	2	647.3802	212 UPPER CUTTER ASSY	
1	1	1	1	1	647.3801	412 UPPER CUTTER ASSY	
647.3704	204	205	212			CABLE CUTTERS KIT HIGH	
647.3703	204	205	212			CABLE CUTTERS KIT LOW	
647.3702	412					CABLE CUTTERS KIT HIGH	
647.3701	412					CABLE CUTTERS KIT LOW	

REF	REF	REF	REF	56	647.3701	GPS MOUNT KIT	
A/R	A/R	A/R	A/R	55	601.2045	RTV	LOCITE 998
A/R	A/R	A/R	A/R	54	601.1012	SEALANT	PR-1475
1	1	1	1	53	601.3083	ADHESIVE RUBBER SEAL	MIL-R-3065
4	4	4	4	52	601.2957	NUTPLATE	MS21047113
4	4	4	4	51	600.0795	NUTPLATE	MS21047113
6	6	6	6	50	601.3066	NUTPLATE	MS21047108
6	6	6	6	49	601.3065	NUTPLATE	MS21047106
18	18	18	18	48	601.2973	LOCKNUT	MS21042-08
79	79	79	79	47	601.2943	LOCKNUT	MS21042-03
4	4	4	4	46	601.2364	CHERRY RIVET	CR3213-4-8
28	28	42	42	45	601.1183	CHERRY RIVET	CR3213-4-5
16	16	19	19	44	601.1915	CHERRY RIVET	CR3213-4-4
24	24	32	32	43	601.0790	CHERRY RIVET	CR3213-4-3
31	31	13	13	42	601.1039	CHERRY RIVET	CR3213-4-2
3704	3703	3702	3701	FIND #	PART #	DESCRIPTION	MATL SPEC.

QTY	3704	3703	3702	3701	FIND #	PART #	DESCRIPTION	MATL	SPEC.
1	1	1	1	1	1	647.3801	412 UPPER CUTTER ASSY		
1	1	1	1	1	1	647.3802	212 UPPER CUTTER ASSY		
1	1	1	1	1	1	647.3803	LOWER CUTTER ASSY LOW		
1	1	1	1	1	1	647.3804	LOWER CUTTER ASSY HIGH		
1	1	1	1	1	1	647.3701	412 CABLE CUTTERS KIT LOW		
1	1	1	1	1	1	647.3702	412 CABLE CUTTERS KIT HIGH		
1	1	1	1	1	1	647.3703	204, 205, 212 CABLE CUTTERS KIT LOW		
1	1	1	1	1	1	647.3704	204, 205, 212 CABLE CUTTERS KIT HIGH		
1	1	1	1	1	1	647.3701	412 CABLE CUTTERS KIT LOW		
1	1	1	1	1	1	647.3702	412 CABLE CUTTERS KIT HIGH		
1	1	1	1	1	1	647.3703	204, 205, 212 CABLE CUTTERS KIT LOW		
1	1	1	1	1	1	647.3704	204, 205, 212 CABLE CUTTERS KIT HIGH		

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

412 CABLE CUTTERS KIT

647.3700

SCALE NONE SHEET 1 OF 5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER :					

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SECTION VIEW A - A $\frac{1}{A-A}$
SHOWN ISOMETRICALLY

DETAIL F
TYPICAL GPS MOUNT KIT INSTALLATION

DETAIL D $\frac{3}{D4}$

DETAIL F

412 CABLE CUTTERS KIT

APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
412 CABLE CUTTERS KIT	
DATE: 07/20/16	REV: 14/C
SCALE: NONE	SHEET 2 OF 5

ORIGINAL DATE JAN 15 1971	APICAL INDUSTRIES		
DATE FILED JAN 15 1971	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760) 724-5300		
APPROVED BY J. A. MOORE	CL. BAKER		
DRAWINGS APPROVED BY P. P. AYVO			
CONTRACT NO.	412 CABLE CUTTERS KIT		
QUANTITY OVERVIEW QTY 1 QTY 2 QTY 3 QTY 4 QTY 5 QTY 6 QTY 7 QTY 8 QTY 9 QTY 10 QTY 11 QTY 12 QTY 13 QTY 14 QTY 15 QTY 16 QTY 17 QTY 18 QTY 19 QTY 20 QTY 21 QTY 22 QTY 23 QTY 24 QTY 25 QTY 26 QTY 27 QTY 28 QTY 29 QTY 30 QTY 31 QTY 32 QTY 33 QTY 34 QTY 35 QTY 36 QTY 37 QTY 38 QTY 39 QTY 40 QTY 41 QTY 42 QTY 43 QTY 44 QTY 45 QTY 46 QTY 47 QTY 48 QTY 49 QTY 50 QTY 51 QTY 52 QTY 53 QTY 54 QTY 55 QTY 56 QTY 57 QTY 58 QTY 59 QTY 60 QTY 61 QTY 62 QTY 63 QTY 64 QTY 65 QTY 66 QTY 67 QTY 68 QTY 69 QTY 70 QTY 71 QTY 72 QTY 73 QTY 74 QTY 75 QTY 76 QTY 77 QTY 78 QTY 79 QTY 80 QTY 81 QTY 82 QTY 83 QTY 84 QTY 85 QTY 86 QTY 87 QTY 88 QTY 89 QTY 90 QTY 91 QTY 92 QTY 93 QTY 94 QTY 95 QTY 96 QTY 97 QTY 98 QTY 99 QTY 100 QTY 101 QTY 102 QTY 103 QTY 104 QTY 105 QTY 106 QTY 107 QTY 108 QTY 109 QTY 110 QTY 111 QTY 112 QTY 113 QTY 114 QTY 115 QTY 116 QTY 117 QTY 118 QTY 119 QTY 120 QTY 121 QTY 122 QTY 123 QTY 124 QTY 125 QTY 126 QTY 127 QTY 128 QTY 129 QTY 130 QTY 131 QTY 132 QTY 133 QTY 134 QTY 135 QTY 136 QTY 137 QTY 138 QTY 139 QTY 140 QTY 141 QTY 142 QTY 143 QTY 144 QTY 145 QTY 146 QTY 147 QTY 148 QTY 149 QTY 150 QTY 151 QTY 152 QTY 153 QTY 154 QTY 155 QTY 156 QTY 157 QTY 158 QTY 159 QTY 160 QTY 161 QTY 162 QTY 163 QTY 164 QTY 165 QTY 166 QTY 167 QTY 168 QTY 169 QTY 170 QTY 171 QTY 172 QTY 173 QTY 174 QTY 175 QTY 176 QTY 177 QTY 178 QTY 179 QTY 180 QTY 181 QTY 182 QTY 183 QTY 184 QTY 185 QTY 186 QTY 187 QTY 188 QTY 189 QTY 190 QTY 191 QTY 192 QTY 193 QTY 194 QTY 195 QTY 196 QTY 197 QTY 198 QTY 199 QTY 200 QTY 201 QTY 202 QTY 203 QTY 204 QTY 205 QTY 206 QTY 207 QTY 208 QTY 209 QTY 210 QTY 211 QTY 212 QTY 213 QTY 214 QTY 215 QTY 216 QTY 217 QTY 218 QTY 219 QTY 220 QTY 221 QTY 222 QTY 223 QTY 224 QTY 225 QTY 226 QTY 227 QTY 228 QTY 229 QTY 230 QTY 231 QTY 232 QTY 233 QTY 234 QTY 235 QTY 236 QTY 237 QTY 238 QTY 239 QTY 240 QTY 241 QTY 242 QTY 243 QTY 244 QTY 245 QTY 246 QTY 247 QTY 248 QTY 249 QTY 250 QTY 251 QTY 252 QTY 253 QTY 254 QTY 255 QTY 256 QTY 257 QTY 258 QTY 259 QTY 260 QTY 261 QTY 262 QTY 263 QTY 264 QTY 265 QTY 266 QTY 267 QTY 268 QTY 269 QTY 270 QTY 271 QTY 272 QTY 273 QTY 274 QTY 275 QTY 276 QTY 277 QTY 278 QTY 279 QTY 280 QTY 281 QTY 282 QTY 283 QTY 284 QTY 285 QTY 286 QTY 287 QTY 288 QTY 289 QTY 290 QTY 291 QTY 292 QTY 293 QTY 294 QTY 295 QTY 296 QTY 297 QTY 298 QTY 299 QTY 300 QTY 301 QTY 302 QTY 303 QTY 304 QTY 305 QTY 306 QTY 307 QTY 308 QTY 309 QTY 310 QTY 311 QTY 312 QTY 313 QTY 314 QTY 315 QTY 316 QTY 317 QTY 318 QTY 319 QTY 320 QTY 321 QTY 322 QTY 323 QTY 324 QTY 325 QTY 326 QTY 327 QTY 328 QTY 329 QTY 330 QTY 331 QTY 332 QTY 333 QTY 334 QTY 335 QTY 336 QTY 337 QTY 338 QTY 339 QTY 340 QTY 341 QTY 342 QTY 343 QTY 344 QTY 345 QTY 346 QTY 347 QTY 348 QTY 349 QTY 350 QTY 351 QTY 352 QTY 353 QTY 354 QTY 355 QTY 356 QTY 357 QTY 358 QTY 359 QTY 360 QTY 361 QTY 362 QTY 363 QTY 364 QTY 365 QTY 366 QTY 367 QTY 368 QTY 369 QTY 370 QTY 371 QTY 372 QTY 373 QTY 374 QTY 375 QTY 376 QTY 377 QTY 378 QTY 379 QTY 380 QTY 381 QTY 382 QTY 383 QTY 384 QTY 385 QTY 386 QTY 387 QTY 388 QTY 389 QTY 390 QTY 391 QTY 392 QTY 393 QTY 394 QTY 395 QTY 396 QTY 397 QTY 398 QTY 399 QTY 400 QTY 401 QTY 402 QTY 403 QTY 404 QTY 405 QTY 406 QTY 407 QTY 408 QTY 409 QTY 410 QTY 411 QTY 412 QTY 413 QTY 414 QTY 415 QTY 416 QTY 417 QTY 418 QTY 419 QTY 420 QTY 421 QTY 422 QTY 423 QTY 424 QTY 425 QTY 426 QTY 427 QTY 428 QTY 429 QTY 430 QTY 431 QTY 432 QTY 433 QTY 434 QTY 435 QTY 436 QTY 437 QTY 438 QTY 439 QTY 440 QTY 441 QTY 442 QTY 443 QTY 444 QTY 445 QTY 446 QTY 447 QTY 448 QTY 449 QTY 450 QTY 451 QTY 452 QTY 453 QTY 454 QTY 455 QTY 456 QTY 457 QTY 458 QTY 459 QTY 460 QTY 461 QTY 462 QTY 463 QTY 464 QTY 465 QTY 466 QTY 467 QTY 468 QTY 469 QTY 470 QTY 471 QTY 472 QTY 473 QTY 474 QTY 475 QTY 476 QTY 477 QTY 478 QTY 479 QTY 480 QTY 481 QTY 482 QTY 483 QTY 484 QTY 485 QTY 486 QTY 487 QTY 488 QTY 489 QTY 490 QTY 491 QTY 492 QTY 493 QTY 494 QTY 495 QTY			

DQA: _____ Date: _____



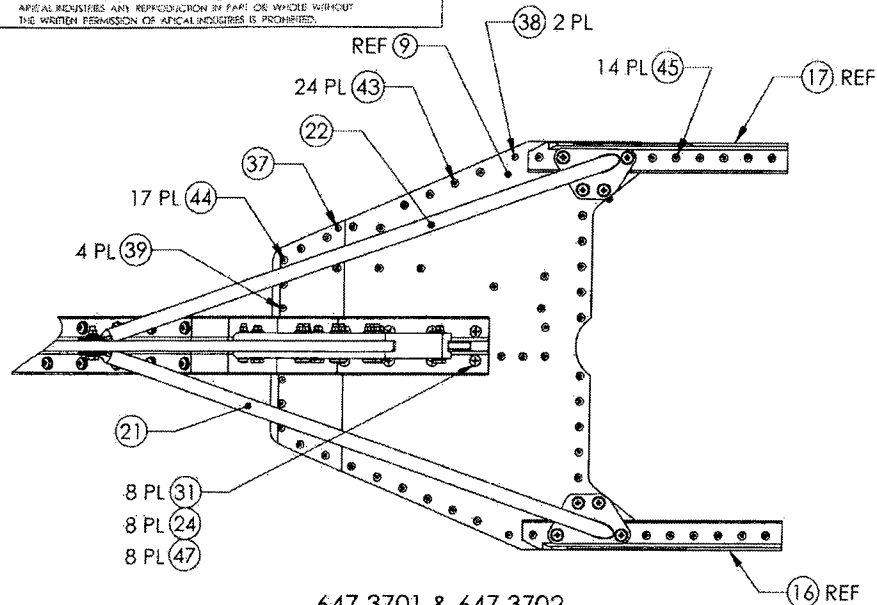
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

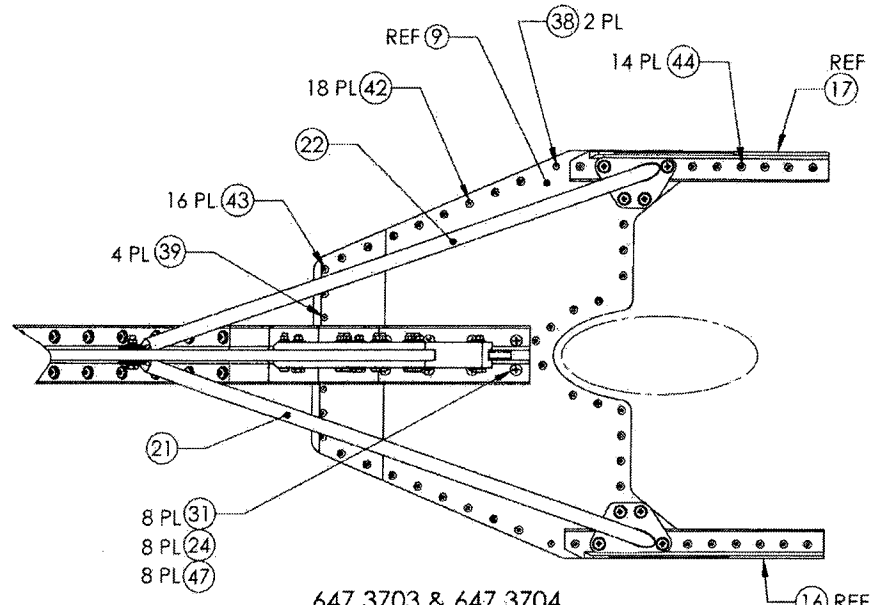
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval			
Description Work Order Deviation				Disposition							
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter		☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes		☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center		☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence	
				OTHER :							

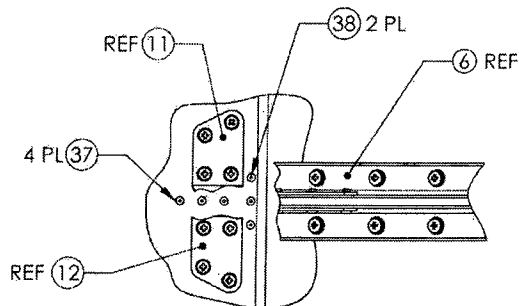
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647.3701 & 647.3702
UPPER CUTTER ASSEMBLY
TOP VIEW



647.3703 & 647.3704
UPPER CUTTER ASSEMBLY
TOP VIEW



DETAIL D
TOP VIEW
BROKEN OUT FOR CLARITY

APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
412 CABLE CUTTERS KIT	
DATE: 07/10/06 DRAWN BY: J. JACHSON CHECKED BY: D. BAILEY APPROVED BY: P. DUNN DISSEMINATION:	REV: 14/C SCALE: NONE SHEET: 3 OF 5

DQA: _____ Date: _____



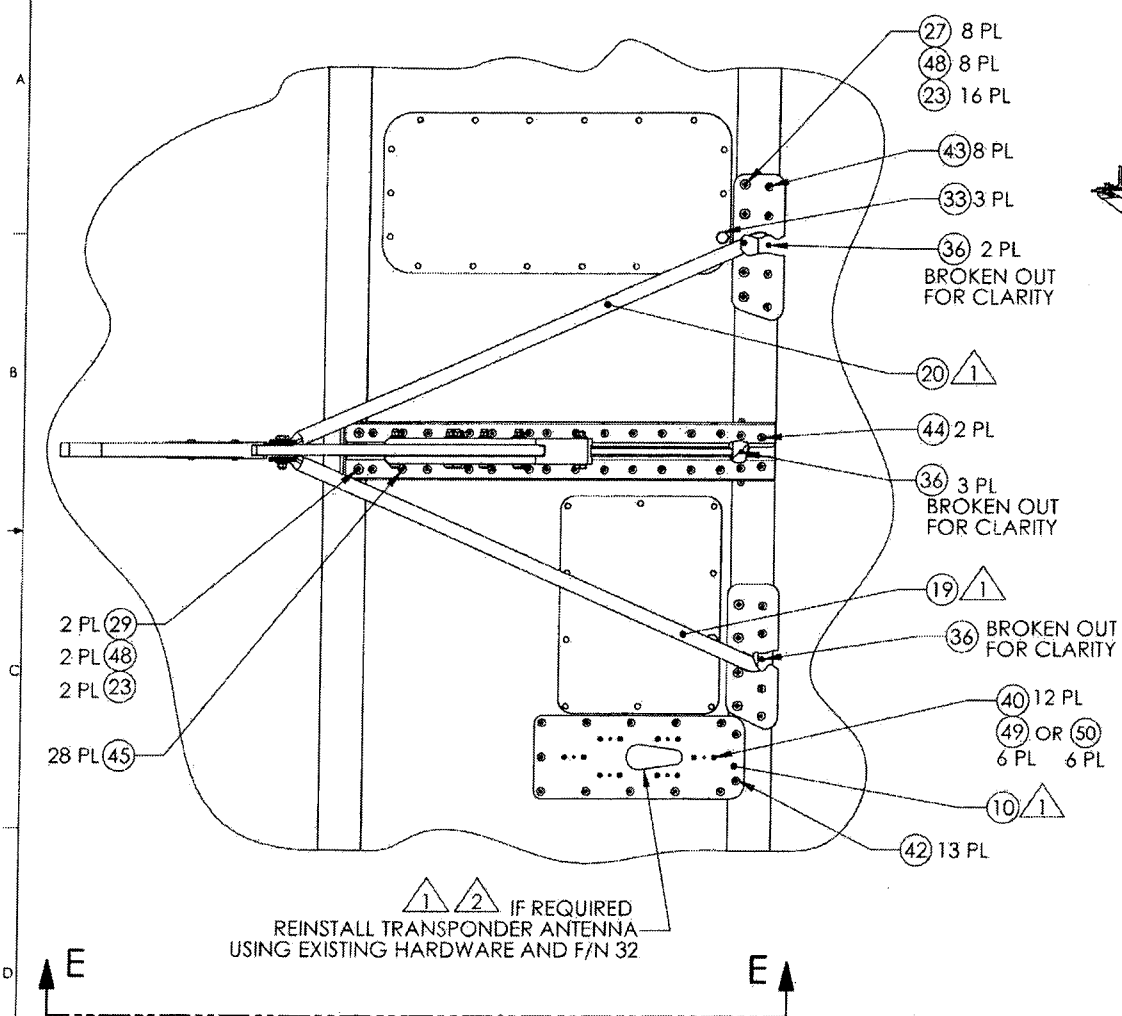
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

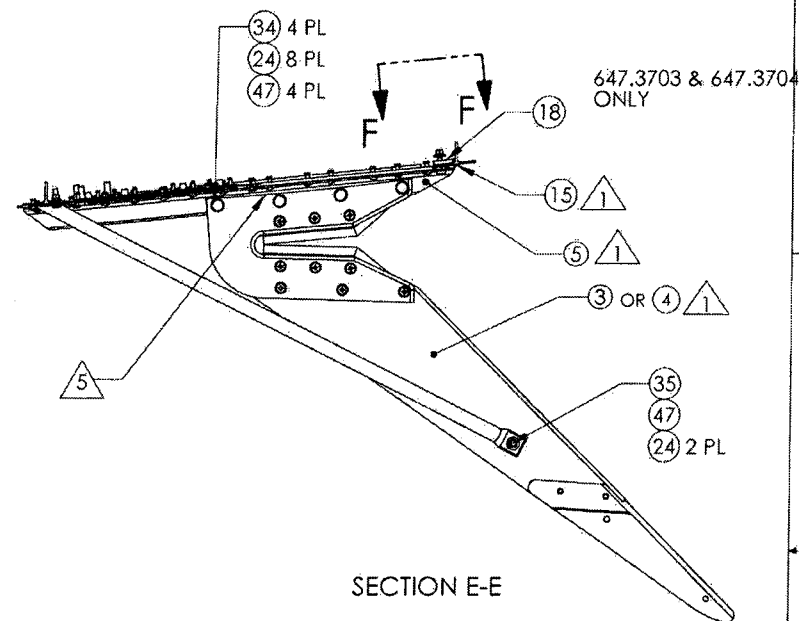
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

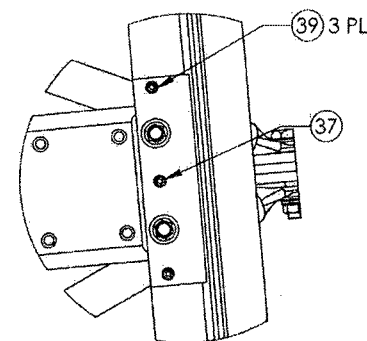
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SECTION VIEW B - B



SECTION E-E



SECTION F-F

ORIGINAL DATE: 1/20/01		APICAL INDUSTRIES	
DESIGNED BY: J. JACOBSON		2608 TEMPLE HEIGHTS DR.	
DRAWING APPROVAL: P. BRYAN		OCEANSIDE, CA 92056-3512 (760)724-5300	
CONTRACT NO.:		412 CABLE CUTTERS KIT	
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.		SIZE: 1/4" CASE CODE: B	ENG. NO.: 647.3700
2 PLACE BOLT HEADS AND 3 PLACE BOLT HEADS		SCALE: NONE	REV. N/C
SHEET 4 OF 5			

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Skid-tube ☐</td> <td style="width: 15%;">Cross tube ☐</td> <td style="width: 15%;">Water Jet ☐</td> <td style="width: 15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																							
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																												
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																												
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Large Fab ☐	Composite ☐	Supplier ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																								
Description Work Order Deviation				Disposition				Completed By																																																							
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										QC / QA Coordinator Approval																																																					
Root Cause		FAULT CATEGORY																																																													
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	No Re-verification ☐	Operator ☐	Offset/Setup ☐	Supplier ☐	Training ☐	Use for Testing ☐	Poor Information ☐	Rushing ☐	Product Improvement ☐	Process Improvement ☐	Manufacturing Process ☐	Past Due ☐	Pressure/Forced ☐	Bending ☐	Centre Not Concentric ☐	Cracks ☐	Crimp/Kink/Ripple/Wave ☐	Cuffs ☐	Crushing ☐	Heat Treat ☐	Wave/Twist in Tube ☐	Marks/Chatter ☐	Temperature/Cure ☐	Set-up ☐	BOM/Route ☐	Broken/Damage/Defect ☐	Inspection Incomplete/Unqualified ☐	Contamination ☐	Countersink ☐	Cut Too Short ☐	Instructions Incomplete/Unclear ☐	Drill Holes ☐	Power Loss/Surge ☐	Folio/Program ☐	Grain ☐	Weld ☐	Wrong Stock Pulled ☐	Out of Sequence ☐	Off-set ☐	Mislabeled ☐	Fit/Function ☐	Misaligned/off center ☐	Positioned Wrong ☐	Outside Dimensions ☐	Over/Under tolerance ☐	Part Incorrect ☐	Part Lost/Missing ☐	Part Moved ☐	Drawing ☐	Finish ☐	Misread ☐	Turning Sequence ☐
OTHER :																																																															

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BROKEN OUT FOR CLARITY
RH SIDE ONLY

△ LH ⑧
OR
△ RH ⑦

DETAIL C 
LH SHOWN, RH OPPOSITE
2 PL

②⑧ 3 PL
②④ 6 PL
④⑦ 3 PL

⑤③ TRIM TO FIT

②⑥ 3 PL
②④ 6 PL
④⑦ 3 PL

②⑤ 6 PL
②④ 12 PL
④⑦ 6 PL

ORIGINAL DATE		APICAL INDUSTRIES	
MODIFIED		2608 TEMPLE HEIGHTS DR.	
DRAWN BY		OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKED BY		412 CABLE CUTTERS KIT	
DRAWING APPROVAL		REV	
CONTRACT NO.		N/C	
ENTER OTHERWISE SPECIFY		SIZE	SCALE
ENTER OTHERWISE SPECIFY		8	NONE
ENTER OTHERWISE SPECIFY		DWG. NO.	647.3700
ENTER OTHERWISE SPECIFY		SHEET 5 OF 5	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval				
Description Work Order Deviation				Disposition							
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter		☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes		☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center		☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence	
				OTHER :							

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NOTES:

- 1 AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.
- 2 IF REQD. USE F/N 32 TO CONNECT CO-AXIAL CABLE.
- 3 VENDOR : ONLINECOMPONENTS.COM
- 4 AT CUSTOMERS OPTION, INSTALL F/N 56 BY MATCH DRILLING ONTO F/N 1 OR F/N 2.
- 5 APPLY F/N 55 TO FAYING SURFACES.
- 6 VENDOR : MCMMASTER-CARR
VENDOR P/N: 86715K27
60A DUROMETER

DETAIL C

5/204

647.3701 SHOWN

REF	REF	REF	REF	56	647.5701	GPS MOUNT KIT		
A/R	A/R	A/R	A/R	50	601.3045	SPV	LOCKITE 598	
A/R	A/R	A/R	A/R	54	601.1014	SEALANT	WETTERS	
1	1	1	1	53	601.3066	ADHESIVE RUBBER SEAL	CLASS 1	
4	4	4	4	52	601.2957	NUTPLATE		
4	4	4	4	51	600.0795	NUTPLATE		
6	6	6	6	50	601.3066	NUTPLATE		
6	6	6	6	49	601.3065	NUTPLATE		
18	18	18	18	48	601.2973	LOCKNUT		
79	79	79	79	47	601.2943	LOCKNUT		
4	4	4	4	46	601.2364	CHERRY RIVET		
28	42	42	42	45	601.1183	CHERRY RIVET		
16	19	19	44	44	601.1915	CHERRY RIVET		
24	32	32	43	43	601.0790	CHERRY RIVET		
31	13	13	42	42	601.1039	CHERRY RIVET		
3704	3703	3702	3701	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.

UNINCORPORATED ECN(s)

01728, 04845, 04981

REV	DESCRIPTION	DATE	APPROVED
1	LAST PRODUCTION REVISED PER		N/C
2	INITIAL RELEASE	07.27.09	P. BRADY

16	16	16	41	601.2207	NUTPLATE RIVET			
12	12	12	40	601.2491	NUTPLATE RIVET			
7	4	4	39	601.1066	CHERRY RIVET			
17	17	17	38	601.1065	CHERRY RIVET			
5	6	6	37	601.1604	CHERRY RIVET			
6	6	6	36	601.5505	CHERRY RIVET			
2	2	2	35	601.1874	BOLT			
8	8	8	34	601.2826	BOLT			
3	3	3	33	601.2823	BOLT			
1	1	1	32	601.2823	CONNECTOR			
8	8	8	31	601.2419	SCREW			
1	1	1	30	601.3070	SCREW			
2	2	2	29	601.2893	SCREW			
14	14	14	28	601.3069	SCREW			
16	16	16	27	601.2263	SCREW			
42	42	42	26	601.1365	SCREW			
12	12	12	25	601.2198	SCREW			
157	157	157	24	601.1607	WASHER			
34	34	34	23	601.2764	WASHER			
1	1	1	22	601.2419	RH UPPER STRUT			
1	1	1	21	601.2419	LH UPPER STRUT			
1	1	1	20	601.2419	LH LOWER STRUT			
1	1	1	19	601.2419	RH LOWER STRUT			
1	1	1	18	601.2419	PLATE			
1	1	1	17	601.2419	BRACKET RH			
1	1	1	16	601.2419	BRACKET LH			
1	1	1	15	601.2419	SHIM			
2	2	2	14	601.2419	SHIM			
2	2	2	13	601.2419	SHIM			
1	1	1	12	601.2419	CLIP			
1	1	1	11	601.2419	CLIP			
1	1	1	10	601.2419	DOUBLER			
1	1	1	9	601.2419	DOUBLER			
1	1	1	8	601.2419	WIPER DEFLECTOR LH			
1	1	1	7	601.2419	WIPER DEFLECTOR RH			
1	1	1	6	601.3915	DEFLECTOR			
1	1	1	5	601.2419	RAIL			
1	1	1	4	601.3804	LOWER CUTTER ASSY HIGH			
1	1	1	3	601.3804	LOWER CUTTER ASSY LOW			
1	1	1	2	601.3804	212 UPPER CUTTER ASSY			
1	1	1	1	601.3801	412 UPPER CUTTER ASSY			
3704	3703	3702	3701	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
					601.3704	204, 205, 212 CABLE CUTTERS KIT HIGH		
					601.3703	204, 205, 212 CABLE CUTTERS KIT LOW		
					601.3702	412 CABLE CUTTERS KIT HIGH		
					601.3701	412 CABLE CUTTERS KIT LOW		

NEXT ASSY (S)

ORIGINAL DATE: 06-24-09
DRAWN BY: J. JACOBSON
CHECKED BY: D. BARBER
DESIGNED BY: J. JACOBSON
DESIGNED BY: J. JACOBSON
DESIGNED BY: J. JACOBSON

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92066-3512 (760)724-5300

412 CABLE CUTTERS KIT

SCALE: NONE
SHEET: 1 OF 5
REV: N/C
DATE: 07/28/09
PART #: 647.3700



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

04881

SHEET 1 OF 1

DWG NO. 647.3700

REV: N/C

PREPARED BY

J. BECKER

DATE: 02/26/15

EFFECT ON DWG

☐ INC. ☒ UNINC.

DWG TITLE: 412 CABLE CUTTERS KIT

APPROVED BY:

ENGR

[Signature]

MFG

[Signature]

QC

[Signature]

EFF.

NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: DELETED F/N 57, REVISED F/N 6.

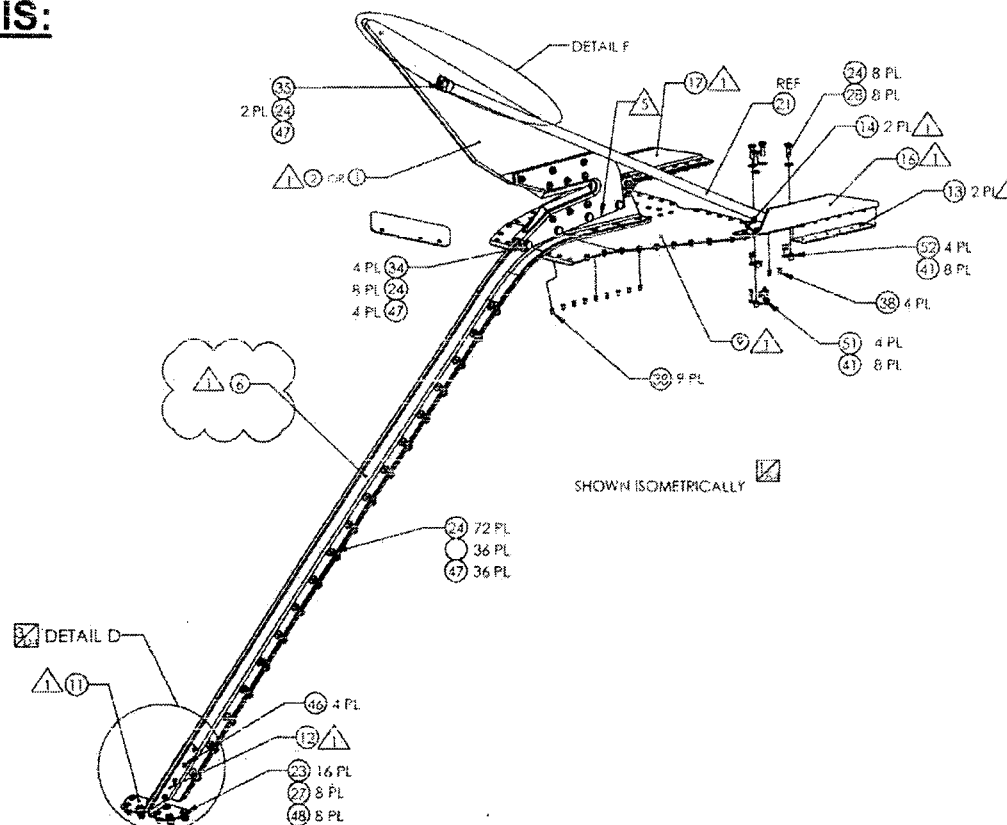
ECR:

N/A

ACTION ITEM:

1.

SHEET 1, ZONE C5 IS:



57	D	647.3916	1	1	1	1	DEFLECTOR UPPER HALF		
6	R	647.3903	1	1	1	1	DEFLECTOR ASSEMBLY		
F/N/TC	PART NUMBER	3704	3703	3702	3701		DESCRIPTION	MATERIAL	SPECIFICATION
QTY									
DOCUMENTS EFFECTED:							CHANGE CATEGORY	DER REVIEW REQUIRED	
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM							☐ MAJOR ☒ MINOR	☐ YES ☒ NO	